

IN THE CLAIMS

1. (Currently Amended) A method of recycling polycarbonate resin waste, comprising:

combining a polycarbonate oligomer and a polycarbonate waste component to form a polycarbonate polycondensation component, wherein the polycarbonate oligomer is the reaction product of a dihydroxy compound and a carbonate diester;

~~subjecting a polycarbonate-~~ the polycarbonate waste component to one or both of a transesterification reaction and a polycondensation reaction, wherein the polycarbonate waste component has an OH group concentration and comprises polycarbonate resin waste; and

~~adjusting the changing an~~ OH group concentration of the polycarbonate waste component to suppress the formation of a branched compound, wherein the OH group concentration is ~~adjusted-changed before being subjected-~~ subjecting the polycarbonate waste component to either of the transesterification reaction or the polycondensation reaction.

2. (Cancelled)

3. (Currently Amended) The recycling method of Claim 1, wherein the polycarbonate waste component further comprises additional polycarbonate oligomer.

4 – 5 (Cancelled)

6. (Original) The recycling method of Claim 1, wherein the OH group concentration is a terminal OH group concentration.

7. (Original) The recycling method of Claim 1, further comprising introducing the polycarbonate waste component and a material to a prepolymerization tank, wherein the material is selected from the group consisting of a dihydroxy compound, a carbonate diester, reaction products of a dihydroxy compound and a carbonate diester, and combinations comprising at least one of the foregoing materials.

8. (Original) The recycling method of Claim 1, wherein the polycarbonate waste component comprises an aromatic polycarbonate comprising bisphenol-A.

9. (Currently Amended) The recycling method of Claim 1, ~~wherein adjusting the OH group concentration comprises further comprising~~ adding a terminal regulator during one or both of the transesterification and polycondensation reactions.

10. (Original) The recycling method of Claim 9, wherein the terminal regulator comprises an aromatic dihydroxy compound.

11. (Original) The recycling method of Claim 10, wherein the aromatic dihydroxy compound comprises bisphenol-A.

12. (Currently Amended) ~~The recycling method of Claim 1;~~ A method of recycling polycarbonate resin waste, comprising:

combining a polycarbonate oligomer and a polycarbonate waste component to form a polycarbonate polycondensation component, wherein the polycarbonate waste component has an OH group concentration and comprises polycarbonate resin waste;

subjecting the polycarbonate polycondensation component to one or both of a transesterification reaction and a polycondensation reaction; and

changing wherein the an OH concentration of the polycarbonate waste component is such that a combined OH concentration of the polycarbonate waste component and the polycarbonate oligomer, before the transesterification reaction and the polycondensation reaction, is about 200 to about 25,000 ppm per unit weight of the polycarbonate waste component.

13. (Currently Amended) The recycling method of Claim 12, wherein the combined OH concentration is about 500 to about 20,000 ppm per unit weight of the polycarbonate waste component.

14. (Currently Amended) The recycling method of Claim 13, wherein the combined OH concentration is about 500 to about 10,000 ppm per unit weight of the polycarbonate waste component.

15. (Original) The recycling method of Claim 1, which results in a polycarbonate product having an intrinsic viscosity of 0.1 to 1.0 dl/g.

16. (Currently Amended) A method of recycling polycarbonate resin waste, comprising:

introducing a dihydroxy compound and a carbonate diester to a mixing tank to form a mixing tank composition;

directing the mixing tank composition to a prepolymerization tank to form a prepolymerization composition;

melting a polycarbonate waste component, wherein the polycarbonate waste component has an OH group concentration and comprises polycarbonate resin waste;

combining the prepolymerization composition with the melted polycarbonate waste component to form a combination;

~~adjusting~~ changing the OH group concentration of the polycarbonate waste component to suppress the formation of a branched compound and/or to attain a target polymerization speed;

polymerizing the combination to form a polycarbonate product; and

extruding the polycarbonate product.

17. (Original) The recycling method of Claim 16, wherein the OH group concentration is adjusted before polymerizing the combination.

18. (Original) The recycling method of Claim 16, wherein the OH group concentration is adjusted before combining the prepolymerization composition with the melted polycarbonate waste component.

19. (Original) The recycling method of Claim 16, wherein the polycarbonate waste component further comprises polycarbonate oligomer.

20. (Original) The recycling method of Claim 16, comprising adjusting the OH group concentration while polymerizing the combination.

21. (Original) The recycling method of Claim 20, wherein adjusting the OH group concentration further comprises adding a terminal regulator.

22. (Original) The recycling method of Claim 20, wherein the terminal regulator comprises an aromatic dihydroxy compound.

23. (Original) The recycling method of Claim 21, wherein the aromatic dihydroxy compound comprises bisphenol-A.

24. (Currently Amended) The recycling method of Claim 16, wherein ~~the, before polymerizing the combination, a combined~~ OH concentration ~~of the is of the polycarbonate resin waste and the polycarbonate oligomer is~~ about 200 to about 25,000 ppm per unit weight of the polycarbonate waste component.

25. (Currently Amended) The recycling method of Claim 24, wherein the combined OH concentration is about 500 to about 20,000 ppm per unit weight of the polycarbonate waste component.

26. (Currently Amended) The recycling method of Claim 25, ~~wherein the OH concentration~~ wherein the combined OH concentration is about 500 to about 10,000 ppm per unit weight of the polycarbonate waste component.

27. (Original) The recycling method of Claim 16, wherein adjusting the OH group concentration comprises controlling the amount of polycarbonate waste component combined with the prepolymerization composition.

28. (New) A method of recycling polycarbonate resin waste, comprising:

combining a reaction product polycarbonate oligomer and a polycarbonate waste component to form a polycarbonate polycondensation component, wherein the reaction product polycarbonate oligomer is the reaction product of a dihydroxy compound and a carbonate diester;

subjecting the polycarbonate waste component to one or both of a transesterification reaction and a polycondensation reaction, wherein the polycarbonate waste component has an OH group concentration and comprises polycarbonate resin waste; and

changing an OH group concentration of the polycarbonate waste component to attain a target polymerization speed, wherein the OH group concentration is changed before subjecting the polycarbonate waste component to either of the transesterification reaction or the polycondensation reaction.